



February 27, 2013



Mr. Phil Perry  
Compliance Branch Chief, Office of Air Quality  
Indiana Department of Environmental Management  
100 North Senate Ave.  
Indianapolis, IN 46204-2251

**Re: Indianapolis Power & Light Company (IPL)  
Petersburg Unit 1 (Source ID: 125-00002)  
Spring 2013 Outage**

Dear Mr. Perry:

Indianapolis Power & Light Company (IPL) will begin a regularly scheduled planned outage at the Petersburg Generating Station's Unit 1 with work beginning on March 2, 2013. During this outage a number of activities will be performed. IPL does not believe any of these activities are modifications subject to the New Source Review (NSR) program but is submitting this letter and report in light of the uncertainty associated with the NSR program.

For NSR to apply, the emissions unit must undertake a "major modification;" that is, a physical or operational change that results in a significant net emissions increase. 326 IAC 2-2-2. Projects that are routine maintenance, repair and replacement are excluded from the definition of major modification irrespective of their impact on emissions. 326 IAC 2-2-1(dd).

While IPL believes this submission is not necessary to conclude NSR is inapplicable to these activities, IPL makes this submission because of the current uncertainty concerning the

scope of the routine maintenance, repair and replacement exclusion, the applicable emissions test and the meaning of the “no reasonable possibility” standard. Therefore, to satisfy, if necessary, any pre-project submission requirement for the applicability of the baseline actual-to-projected-actual annual emissions test in the revised regulations, IPL submits a description of the activities to be performed during the planned outage on Petersburg Unit 1 (*see Attachment B*) and a description of emissions analyses that demonstrates that these activities would not be expected to result in a significant emissions increase or a significant net emissions increase of any NSR regulated pollutant (*see Attachment A*). Baseline actual emissions and projected actual emissions are included for the following NSR regulated pollutants: SO<sub>2</sub>; NO<sub>x</sub>; PM; PM<sub>10</sub>; CO; ozone (VOC); elemental lead; beryllium; mercury; fluorides; sulfuric acid mist; CO<sub>2</sub>; N<sub>2</sub>O; and CH<sub>4</sub>. TRS Compounds (including H<sub>2</sub>S) are assumed to be negligible due to oxidative environment in the combustion process and are therefore not included.

As described in the submission and based on the analyses performed with respect to these pollutants, IPL does not believe that any of these activities would be major modifications subject to NSR. We understand that the regulations do not require a response from IDEM as the result of this submittal. Should you have any questions regarding this submittal, please contact Angelique Oliger at (317) 261-5852.

Regards,

A handwritten signature in black ink, appearing to be 'Angelique Oliger', with a long horizontal line extending to the right.

Angelique Oliger  
Corporate Affairs, Sr. Environmental Coordinator  
Indianapolis Power & Light Company

cc: Vickie Cordell, IDEM  
Pat Austin, IDEM  
Jeff Harter, IPL  
Byron Taylor, SA

enclosure

## Attachment A: IPL Petersburg Generating Station Unit 1 Emissions Analysis

### \*\*\* INDIANAPOLIS POWER AND LIGHT - PETERSBURG - UNIT 1 \*\*\*

Capacity 2200 MMBTU/hour

Capacity Change

N

COAL

OIL

Heat content 11367 BTU/lb

Heat content 139320 BTU/gal

Percent Sulfur 3.05 %

Percent Sulfur 0.36 %

Percent Ash 8.2 %

ESP control efficiency 98.89

POLLUTANT	PSD/ Emission Offset Major Modification Threshold , tons/year	Unit Potential to Emit, tons/year <sup>d</sup>	Baseline Actual Emissions, tons/year	Potential to Emit minus Baseline Actual <sup>a</sup> , tons/year	Future Projected Actual Emissions, tons/year	Future Projected Actual minus Baseline Actual, tons/year	Could have Accomodated Emissions <sup>b</sup> , tons/year	Net Emissions Increase <sup>c</sup> , tons/year
PM	25	385.80	300.16	85.64	309.91	9.75	53.19	-43.44
PM-10	15	281.45	216.44	65.01	226.15	9.71	41.36	-31.65
PM-2.5	5	215.87	165.98	49.88	173.44	7.45	31.73	-24.28
SO2	40	57816.00	8011.05	49804.95	2743.83	-5267.22	9506.35	-14773.57
NOx	40	2967.01	1951.10	1015.91	1746.58	-204.52	370.10	-574.62
VOC	40	25.43	19.56	5.88	20.43	0.88	3.74	-2.86
CO	100	211.93	163.27	48.66	170.52	7.25	30.90	-23.65
Lead	6.00E-01	1.04E-01	2.00E-02	8.45E-02	2.08E-02	8.67E-04	3.70E-03	-2.83E-03
Beryllium	4.00E-04	2.89E-02	3.62E-04	2.85E-02	3.69E-04	7.14E-06	5.18E-05	-4.47E-05
Mercury	1.00E-01	3.75E-02	2.88E-02	8.68E-03	3.01E-02	1.30E-03	5.52E-03	-4.23E-03
Fluorides	3	63.58	48.85	14.73	36.25	-12.60	5.22	-17.82
H2SO4	7	27.79	21.35	6.44	22.32	0.96	4.10	-3.14
CO2		2038759.57	1521674.85		1589670.28		289630.85	
N2O		33.91	26.07		27.24		4.98	
CH4		16.95	13.03		13.62		2.50	
CO2e	75,000	2,049,627	1,530,032	519,596	1,598,402	68,371	291,228	-222857.73

**Notes:**

a - for pollutants where the Potential to Emit minus the actual emissions baseline is < major modification threshold, future actual records are not required. (see 326 IAC 2-2-1(pp)(2)(B)).

b - "Could have accommodated emissions" are calculated based on annual emissions summed from each calendar month as calculated by subtracting the actual emissions for the month from the maximum calendar monthly emissions for the five or ten year period. (see 326 IAC 2-2-1(pp)(2)(A)).

c - Net emissions increase is the Future Projected actual emissions (adjusted for emisisions that could have been accomodated prior to the project) minus the past actual emissions. For those pollutants where the value is less than the PSD major modification threshold and for which the PTE minus past actual value is not less than the major modifaicon threshold, records must be kept to demonstrate, on an annual basis, that the future actual emissions are not greater than the Future Projected Actual Emissions (see 326 IAC 2-2-1(ii)).

d - Potential to emit includes physical or operational limitations which are enforceable as a practical matter (see 326 IAC 2-2-2(ii)).

Unit 1 2013 Spring Outage Work Summary  
March 2, 2013 thru March 22, 2013

1. Top Ash/Ash Tank/Bottom Ash – (\$217K O&M)
  - a. Bottom ash system maintenance to ash evacuation system and lines
  - b. Bottom ash pipe inspections
  - c. Top Ash system maintenance
  - d. Ash tank maintenance and repairs to casing
  - e. Change 2 ash grinders
2. Boiler System/Furnace – (\$415K O&M Furnace – \$171K High Energy Piping)  
(\$150K O&M Boiler & Safety Valves)
  - a. State Inspections per code
  - b. Superheater & Reheater header inspections, (penthouse) Nondestructive examination of and Ultrasonic testing mapping
  - c. Full Boiler scaffolding and inspections of main furnace and back pass
  - d. Repairs to lower dead air space
  - e. Boiler Pressure Part inspections
  - f. Boiler valve repairs
  - g. Seam welded high energy piping inspections
3. Boiler Air - (\$175K O&M)
  - a. Air Pre-heater wash and repairs
  - b. Duct inspections & repairs
  - c. Duct stiffener/structural inspections & repairs
  - d. Air & by-pass seal inspection & repairs
4. Boiler Fuel – (\$650K O&M)
  - a. Feeder & feeder motor repairs
  - b. Burner and air tip inspection and repairs
  - c. Pulverizer maintenance
5. Circulating Water (\$142K O&M,)
  - a. Circulating water pump discharge valve repairs
  - b. Circulating water pump overhaul
  - c. Circulating water discharge line inspection & repairs
6. Condensate System (\$175K O&M,)
  - a. Condensate valve repairs
  - b. Polishing filter inspection
  - c. Piping repairs (O&M)
  - d. 1-2 Condensate Pump & Motor overhaul

7. Electrical (\$125K O&M)
  - a. Recondition of low and med-voltage breakers (30)
  - b. Switch gear cleaning
  - c. General control cabinet cleaning
  - d. 4160V motor reconditioning
8. Environmental (\$872K O&M)
  - a. Inspection and repairs
  - b. Precipitator wash & inspection
  - c. Repair Rapper Drive Units
  - d. Clean, inspect and replace high voltage bushings
  - e. Replace/repair all side access doors
  - f. Repair 225 rapper sleeves
  - g. Inspect & repair structure
  - h. Inspect/repair for air-in-leakage
9. Feedwater System (\$190K O&M )
  - a. Valve inspections and repairs
  - b. Replace 2ea Recirculating Valves
  - c. Inspect/repair injection seal valves
  - d. Feedwater heater inspections and repairs
10. Sootblower System (\$25K O&M)
  - a. Inspection and sweep check of wall blowers
  - b. Replace sootblower sleeves and refractory
11. Turbine – Generator Systems (\$160K O&M)
  - a. Generator crawl through inspection
  - b. Clean/repair H2 coolers
  - c. Clean/inspect lube oil coolers
  - d. Install balance shot in coupling between high pressure & low pressure section
12. Misc – (\$300K O&M)
  - a. Induced draft and forced draft fan repairs NDE
  - b. Asbestos Abatement
  - c. Coal bunker inspections
13. Scrubber – (\$650K O&M)
  - a. Cleaning (jetting, washing, vacuuming, etc.)
  - b. Inspections & repairs
  - c. Tower header/nozzle, packing, tank agitator, work
  - d. Electrical work
  - e. Booster fans, vanes, dampers, ductwork, etc.

14. CapEx –

- a. Misc Valve replacements (\$555K)
- b. Misc Asbestos insulation replacement (\$100K)
- c. Ductwork, insulation, lagging, piping etc. (\$180K)
- d. Scrubber ductwork, expansion joints, etc. (\$260K)
- e. Turbine/Generator electrical/controls, etc. (\$250K)